Appl. No. 09/833,845
Amdt. dated May 14, 2007
Office Action of March 13, 2007

PATENT

REMARKS

Claims 1, 4-8, and 10-13 are pending after entry of the present Amendment.

Applicants respectfully request reconsideration of the application in view of the following

remarks submitted in support thereof.

Rejections under 35 U.S.C. § 103(a):

Claims 1, 4-8, and 10-13 were rejected under 35 U.S.C. § 103(a), as being

unpatentable over Ma et al. (U.S. Patent 5,920,725) (hereinafter "Ma"), in view of Ferguson

et al. (U.S. Patent 6,976,079) (hereinafter "Ferguson"), and in further view of Arnaiz et al.

(U.S. Patent 7,080,371) (hereinafter "Arnaiz"). This rejection is respectfully traversed.

Ma's teachings are directed to a distributed system, which executes objects both on

the server side and the client side. As noted by the Examiner, Ma does not explicitly suggest

or teach *generating an upgraded control module* defining upgraded application-specific

policies relative to the original control module or *maintaining a recoverable state of the*

upgraded control module at a state server. In contrast, the control module of the claimed

invention generates an upgraded control module defining upgraded application specific

policies relative to the original control module and a recoverable state of the upgraded control

module is maintained at a state server for recovery during upgrades.

Although Ferguson teaches a method for upgrading software applications, the

teachings of Ferguson discloses a distributed computing environment, wherein a first

application server *re-directs* any new requests for a software to-be-upgraded on a server to-

be-upgraded to a second application server using a router and then begins generating

upgraded service module and upgraded control module for upgrading the software

application (service module) and the server application (control module) on the server to-be-

upgraded. (*See Figure 3, step 76 and related description in column 5, lines 27-40*). Further,

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if the software on the first application server is servicing an active client request, the system

waits till the application server is no longer servicing the active client request before

generating and upgrading the upgraded control module and updated service module. *(See*

Col. 5, lines 48-52). This clearly indicates that the generation and updating of application

upgrades are performed on the server *by disrupting the application service* on the server to-

be-upgraded which is against the teaching of the claimed invention. The wait for upgrading

of software on each application server further adds to delay in upgrading and running the

application on that application server. Therefore, it would not be obvious to one skilled in the

art to look at Ferguson, which teaches away from *providing upgrades without disruption to*

the service of the claimed invention, in order to generate upgraded control module and

upgraded service module.

Combining Ferguson with Ma will not suggest or teach each and every element of the

claimed invention as the combined teachings do not suggest or teach generating an upgraded

control module/upgraded service module while the application is providing online execution

services.

In contrast, the claimed invention generates an updated control module and an

updated service module on the server to-be-upgraded *while the application is providing*

online execution services so that upgrades can be performed in place with no disruption in

service. (See page 35, lines 1-2 and lines 21-23). The currently amended claims of the

claimed invention generates and updates upgraded control module and upgraded service

module without any disruption to any service provided by the application on the server.

Arnaiz deals with automatic upgrade of software components of an application on a

client. Like Ferguson, in order to upgrade the software components on the client, the server

sends shutdown messages to all currently active server components, waits for all server

components to stop, then, invokes the upgrade wizard and exits. Similarly, the client invokes

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an upgrade wizard to upgrade the software on the client and exits. (*See column 6, lines 40-45*). This means that the servers and the clients are not online during the software component upgrades. Thus, Arnaiz does not cure any of the deficiencies of Ma and Ferguson. Combining the teachings of Arnaiz with the teachings of Ma and Ferguson will not suggest or teach each and every element of the claimed invention as the combined teachings do not suggest or teach generating an updated control module and updated service module on the server while the application is providing online execution services so that upgrades can be performed in place with no disruption in service.

The independent claims 1 and 8 of the claimed invention describe a method wherein a control module is used in upgrading the objects. The control module <u>supervises the life cycle of the control modules</u> by collaborating with the runtime executive subsystem. (*See page 15, lines 12-15, page 17, lines 1- 13*). The control module of the claimed invention manages the systematic upgrade throughout the system while maintaining the application-specific strategies and policies for an application. Moreover, these upgrades are performed <u>in place with no disruption in service</u>. *See page 35, lines 1-2 and lines 21-23*. This feature provides for a seamless upgrade process without causing unnecessary delay or disruption in the running of the application. Additionally, the claimed invention also provides for a failsafe upgrade by <u>maintaining a recoverable state of the upgraded control module in a state server</u>. (*See page 14, lines 13-16, page 19, lines 2-3, and page 27, lines 4-6*).

As can be seen from the above argument, the teachings of Ma, Ferguson and Arnaiz, combined do not provide each and every feature of the amended independent claims 1 and 8. For at least the reasons noted herein, the Applicants respectfully submit that the now claimed invention is patentable over the cited art.
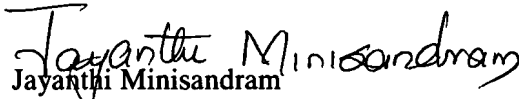
Claims 4-7 and 10-13 are directly dependent on independent claims 1 and 8 respectively. Based on arguments presented for independent claims 1 and 8, Applicants

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request the Examiner to withdraw the 35 U.S.C. §103(a) rejections on claims 4-7 and 10-13.

A Notice of Allowance is respectfully requested.

If the Examiner has any questions concerning the present Amendment, the Examiner

is kindly requested to contact the undersigned at (408) 774-6905. If any other fees are due in

connection with filing this Amendment, the Commissioner is also authorized to charge

Deposit Account No. 50-0805 (Order No. SUNMP003). A duplicate copy of the transmittal

is enclosed for this purpose.

Respectfully submitted,
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